Indiana Department of Education
SUPPORTING STUDENT SUCCESS

I. Technology Operation Skills: The student is able to use hardware and software components, The student understands the difference between input and output devices	Content Area	6	7	8
1. Uses hardware and peripherals (input and output devices) to support content area learning including the use of touch screens and simple voice-recognition systems. *Students know how to connect and use a wide variety of input and output devices and common peripherals (e.g., scanners, digital probes, digital cameras, and video projectors), and **how to access** networked resources.*	**E/LA**	**6.4.6 6.4.7 6.5.3 6.7.6 6.7.9 6.7.11**	**7.4.7 7.5.3**	**8.4.4 8.5.3**
	SCI	**6.2.7**	**7.2.6**	**8.2.5 8.7.3**
	SS	**6.1.23 6.2.5 6.3.2 6.3.10 6.4.7**	**7.1.24 7.2.3 7.3.2 7.3.14**	**8.1.28 8.1.30 8.1.31 8.2.10 8.3.8 8.4.11**
2. Demonstrates effective keyboarding techniques. *Students know how to use proper keyboarding posture, hand and finger positions, and touch-typing techniques to improve accuracy, speed, and general efficiency in computer operation.*	**E/LA**	**6.2.1 6.4.6 6.4.7 6.5.3**	**7.4.7 7.5.3 7.7.10**	**8.4.4 8.4.6 8.5.3**
	SCI	**6.2.2 6.2.7**		**8.2.5**
	SS	**6.1.23 6.2.5 6.3.10 6.4.7**	**7.1.24 7.2.3 7.3.14**	**8.1.28 8.1.30 8.1.31 8.2.10 8.3.8 8.4.11**
3. Connects to the Internet using school network/modem and browser. *Students know how to apply search engines, word processors, databases, spreadsheets, timelines, charts or graphs, communications, surveys, and other technology-based research and analysis tools to organize, synthesize, interpret, and communicate results from data collected regarding technological advances over time and the effects of the changes on occupations in business, industry, education, and other areas.*	**E/LA**	**6.2.1 6.4.6 6.5.3 6.7.6 6.7.9 6.7.11**	**7.5.3 7.7.7 7.7.10**	**8.5.3**
	SCI			
	SS	**6.1.23 6.2.5 6.3.10 6.4.7**	**7.1.24 7.2.3 7.3.14**	**8.1.28 8.1.30 8.1.31 8.2.10 8.3.8 8.4.11**

I. Technology Operation Skills: The student is able to use hardware and software components, The student understands the difference between input and output devices	**Content Area**	**6**	**7**	**8**
4. Uses graphing/algebraic calculator to support graphing and/or arithmetic and algebraic functions. *Students know how to evaluate, select, and use appropriate technology tools and information resources to plan, design, develop, and communicate content information, appropriately addressing the target audience and providing accurate citations for sources.* *Students know how to select and use technology tools efficiently and effectively to collect, analyze, and display data for class assignments, projects, and presentations.*	**E/LA**			
	SCI	**6.2.2**		**8.2.4**
	SS			
II. Technology Conceptualization Skills: The student is able to demonstrate a comprehensive understanding of the interactivity and operation of technology systems.	**Content Area**	**6**	**7**	**8**
1. Understands and is able to express verbally the functional relationship between basic hardware and software systems and their components. *Students select correct terminology and concepts associated with hardware, software, computer systems, networks, Internet connectivity, and technology applications (e.g., word processor, database, spreadsheet, multimedia, telecommunications, drawing, concept-mapping, simulation) and other digital resources*	**E/LA**	**6.2.1** **6.7.6**	**7.4.7**	**8.4.6**
	SCI			
	SS	**6.1.23** **6.2.5** **6.3.2** **6.3.10** **6.4.7**	**7.1.24** **7.2.3** **7.3.2** **7.3.14**	**8.1.28** **8.1.30** **8.1.31** **8.2.10** **8.3.8** **8.4.11**
2. Understands the use of and the necessity for input and output devices. *Students identify software used for information management and know which types of software can be used most effectively for different types of data, different information needs, and for conveying results to different audiences.*	**E/LA**	**6.2.1** **6.7.6**	**7.4.7** **7.7.7**	**8.4.6**
	SCI			**8.2.5** **8.7.3**
	SS	**6.1.23** **6.2.5** **6.3.2** **6.3.10** **6.4.7**	**7.1.24** **7.2.3** **7.3.2** **7.3.14**	**8.1.28** **8.1.30** **8.1.31** **8.2.10** **8.3.8** **8.4.11**

II. Technology Conceptualization Skills: The student is able to demonstrate a comprehensive understanding of the interactivity and operation of technology systems.	**Content Area**	**6**	**7**	**8**
3. Understands the organizational concept behind using files and folders for storing information and is able to organize files into folders. *Students identify information storage devices and strategies used most efficiently and effectively for storing different types of data, for different purposes, for portability, and for very large files.*	**E/LA**	**6.4.7** **6.7.6**	**7.4.7**	**8.4.6**
	SCI			
	SS		**7.1.24**	
4. Uses technology terminology appropriately. *Students use accurate terminology and select appropriate tools and technology resources to accomplish a variety of tasks and solve problems.*	**E/LA**	**6.4.6** **6.4.7** **6.5.3** **6.7.11**	**7.4.7** **7.5.3** **7.7.10**	**8.4.6** **8.5.3**
	SCI			
	SS	**6.1.23** **6.2.5** **6.3.2** **6.3.10** **6.4.7**	**7.1.24** **7.2.3** **7.3.2** **7.3.14**	**8.1.28** **8.1.30** **8.1.31** **8.2.10** **8.3.8** **8.4.11**
5. Understands the use of and the difference between temporary memory (RAM), permanent memory (ROM), and storage (such as digital storage on hard, floppy, and zip disks; magnetic tape; and CD/DVD optical storage). *Students demonstrate an understanding of concepts underlying hardware, software, and connectivity; the variety of ways that Information and technology resources can be combined to develop and promote understanding; and the value of visual and auditory features* to convey accurate and convincing information.	**E/LA**			
	SCI	**6.2.7**		**8.2.5**
	SS			**8.1.28**
6. Familiar with a variety of technologies. *Students demonstrate an understanding of concepts underlying hardware, software, and connectivity; the variety of ways that information and technology resources can be combined to develop and promote understanding; and the* value of visual and auditory features to convey accurate and convincing information.	**E/LA**	**6.7.6** **6.7.9**	**7.4.7** **7.7.7**	**8.4.6**
	SCI		**7.1.9** **7.1.10**	
	SS	**6.1.23** **6.2.5** **6.3.2** **6.3.10** **6.4.7**	**7.1.24** **7.3.2** **7.3.14**	**8.1.28** **8.1.30** **8.1.31** **8.2.10** **8.3.8** **8.4.11**

II. Technology Conceptualization Skills: The student is able to demonstrate a comprehensive understanding of the interactivity and operation of technology systems.	**Content Area**	**6**	**7**	**8**
7. Can identify technological advances in society. *Students identify legal and ethical issues related to use of information and communication technology, recognize consequences of its misuse, and predict possible long-range effects of ethical and unethical use of technology on culture and society.*	**E/LA**			
	SCI	**6.1.8** **6.4.13**	**7.1.5** **7.1.9** **7.1.10**	
	SS			
III. Social and Ethical Issues of Technology: The student understands the social, legal, and ethical issues related to technology use. The student practices responsible use of hardware, software, and data and positively interacts with technology independently and in collaboration with others.	**Content Area**	**6**	**7**	**8**
1. Practices respectful and responsible use of technology through abiding by the school technology and Internet use policy. *Students identify and discuss terms and concepts associated with safe, effective, and efficient use of the Internet and telecommunications resources (e.g., password, firewall, spam, security, fair use, acceptable use policy [AUP], Internet use policy [IUP], release form) and recognize strategies that demonstrate ethical, legal, and socially responsible use of technology and electronic resources.*	**E/LA**	**6.5.3** **6.7.6** **6.7.11**	**7.5.3** **7.7.7** **7.7.10**	**8.4.4** **8.5.3**
	SCI			
	SS	**6.1.23** **6.2.5** **6.3.10** **6.4.7**	**7.1.24** **7.2.3** **7.3.14**	**8.1.28** **8.1.30** **8.1.31** **8.2.10** **8.3.8** **8.4.11**
2. Demonstrates an understanding of plagiarism and fair use, and respects copyright laws of information producers, such as authors and artists. *Students discuss issues related to acceptable and responsible use of information and communication technology (e.g., privacy, security, copyright, file sharing, plagiarism), analyze the consequences and costs of unethical use of information and computer technology (e.g., hacking, spamming, consumer fraud, virus setting, intrusion), and identify methods for addressing these risks.*	**E/LA**	**6.5.3** **6.7.6** **6.7.11**	**7.5.3** **7.7.10**	**8.5.3**
	SCI			
	SS	**6.1.23** **6.2.5** **6.3.10** **6.4.7**	**7.1.24** **7.2.3** **7.3.14**	**8.1.28** **8.1.30** **8.1.31** **8.2.10** **8.3.8** **8.4.11**

III. Social and Ethical Issues of Technology: The student understands the social, legal, and ethical issues related to technology use. The student practices responsible use of hardware, software, and data and positively interacts with technology independently and in collaboration with others.	**Content Area**	**6**	**7**	**8**
3. Demonstrates an understanding of the interaction and interdependence between humans and technology. *Students identify how they currently use technology and predict how they may use and benefit from its use in their future.*	**E/LA**			
	SCI	**6.1.8** **6.4.13**	**7.1.5** **7.1.9** **7.1.10**	
	SS	**6.3.2** **6.3.10**	**7.1.24** **7.2.3** **7.3.2** **7.3.14**	**8.1.28** **8.1.30** **8.1.31** **8.2.10** **8.3.8** **8.4.11**
4. Understands how changes in technology affect the workplace and society. *Students recognize, discuss, and visually represent current changes in information technologies and the effect those changes have on the workplace and society. Students identify capabilities and limitations of contemporary and emerging technology resources.*	**E/LA**			
	SCI	**6.1.8** **6.4.13**	**7.1.5** **7.1.9** **7.1.10**	
	SS			
IV. Technology as a Productivity Tool: The student is able to use technology as a tool to enhance learning and creativity. Students are able to use technology to increase productivity in developing models, publications, and other creative works.	**Content Area**	**6**	**7**	**8**
1. Uses the graphical user interface of the operating system with application software to import images, text, and video/sound (i.e., databases, spreadsheets, word processors, or educational software). See specific Productivity Tools. *Students know how to identify appropriate file formats for a variety of applications and apply utility programs to convert formats, as necessary, for effective use in Web, video, audio, graphic, presentation, word-processing, database, publication, and spreadsheet applications.*	**E/LA**	**6.4.6** **6.4.7** **6.5.3** **6.7.6** **6.7.9**	**7.4.7** **7.5.3**	**8.4.6** **8.5.3**
	SCI	**6.2.7**		**8.2.5**
	SS	**6.1.23** **6.2.5** **6.3.10** **6.4.7**	**7.1.24** **7.2.3** **7.3.14**	**8.1.28** **8.1.30** **8.1.31** **8.2.10** **8.3.8** **8.4.11**

IV. Technology as a Productivity Tool: The student is able to use technology as a tool to enhance learning and creativity. Students are able to use technology to increase productivity in developing models, publications, and other creative works.	**Content Area**	**6**	**7**	**8**
2. Demonstrates word-processing skills by using the word processor editing features to write papers and create brochures or posters. *Students describe and apply common software features (e.g., spellchecker and thesaurus to ensure accuracy of word-processing documents; formulas and chart generation in spreadsheets, and insertion of pictures, movies, sound, and charts in presentation software) to enhance communication to an audience, promote productivity, and support creativity.*	**E/LA**	**6.4.7** **6.7.6**	**7.4.7** **7.7.10**	**8.4.6**
	SCI			
	SS		**7.1.24**	
3. Demonstrates spreadsheet and database skills by creating tables and graphic representations of information. *Students describe and apply common software features (e.g., spellchecker and thesaurus to ensure accuracy of word-processing documents; formulas and chart generation in spreadsheets, and insertion of pictures, movies, sound, and charts in presentation software) to enhance communication to an audience, promote productivity, and support creativity.*	**E/LA**	**6.7.6**	**7.4.7**	**8.4.6**
	SCI	**6.2.2**		**8.7.3**
	SS		**7.1.24**	
4. Demonstrates telecommunications skills through the use of e-mail to contact peers, family, teachers, and experts. *Students know how to use technology tools and resources for managing and communicating personal, professional, or educational information (e.g., managing finances, schedules, addresses, purchases, correspondence, uniform resource locators [URLs], e-mail addresses, online references, citations).*	**E/LA**	**6.4.6** **6.7.6**		
	SCI			
	SS			

IV. Technology as a Productivity Tool: The student is able to use technology as a tool to enhance learning and creativity. Students are able to use technology to increase productivity in developing models, publications, and other creative works.	**Content Area**	**6**	**7**	**8**
5. Demonstrates multimedia production through the use of paint, draw, or graphics packages to create simple visual aids (e.g., signs, posters, banners, and charts). *Students know how to work in teams to use hardware and software tools (e.g., concept-mapping software, word processor, database, spreadsheet, publishing software, Web publishing software, drawing software, puzzle development software, timeline development software, digital still and video cameras, probes, motion detectors, light detectors, digital microscopes) to support learning, research, productivity, and creativity.*	**E/LA**	**6.7.6**		
	SCI			**8.7.3**
	SS			
6. Demonstrates spreadsheet and database skills by accessing and retrieving data. *Students describe and apply common software features (e.g., spellchecker and thesaurus to ensure accuracy of word-processing documents; formulas and chart generation in spreadsheets, and insertion of pictures, movies, sound, and charts in presentation software) to enhance communication to an audience, promote productivity, and support creativity.*	**E/LA**	**6.4.6** **6.7.6**	**7.4.7** **7.5.3** **7.7.10**	**8.4.6**
	SCI	**6.2.2** **6.2.7**		**8.2.5** **8.7.3**
	SS	**6.1.23** **6.2.5** **6.3.10** **6.4.7**	**7.1.24** **7.2.3** **7.3.14**	**8.1.28** **8.1.30** **8.1.31** **8.2.10** **8.3.8** **8.4.11**
7. Demonstrates word-processing skills by creating documents and opening previously created documents. *Students describe and apply common software features (e.g., spellchecker and thesaurus to ensure accuracy of word-processing documents; formulas and chart generation in spreadsheets, and insertion of pictures, movies, sound, and charts in presentation software) to enhance communication to an audience, promote productivity, and support creativity.*	**E/LA**	**6.4.7** **6.7.6**	**7.4.7**	**8.4.6**
	SCI			**8.2.5**
	SS		**7.1.24**	

IV. Technology as a Productivity Tool: The student is able to use technology as a tool to enhance learning and creativity. Students are able to use technology to increase productivity in developing models, publications, and other creative works.	**Content Area**	**6**	**7**	**8**
8. Demonstrates word-processing skills by using editing functions effectively (e.g., delete, cut and paste, and insert). *Students describe how to use online environments or other collaborative tools to facilitate design and development of materials, models, publications, and presentations; they know how to apply utilities for editing pictures, images, and charts.*	**E/LA**	**6.4.7**	**7.4.7**	**8.4.6**
	SCI			**8.2.5**
	SS		**7.1.24**	
9. Demonstrates word-processing skills by printing and saving document. *Students describe how to use online environments or other collaborative tools to facilitate design and development of materials, models, publications, and presentations; they know how to apply utilities for editing pictures, images, and charts.*	**E/LA**	**6.7.6**	**7.4.7**	**8.4.6**
	SCI			**8.2.5**
	SS		**7.1.24**	
10. Demonstrates word-processing skills by using spell check at an appropriate level and demonstrating word-processing skills by typing with the correct keyboarding skills. *Students describe how to use online environments or other collaborative tools to facilitate design and development of materials, models, publications, and presentations; they know how to apply utilities for editing pictures, images, and charts.* *Students describe how specific productivity tools support personal productivity, remediation of skill deficits, and their capacities for learning in different subjects*	**E/LA**	**6.4.6** **6.4.7**	**7.4.7**	**8.4.4** **8.4.6**
	SCI			
	SS		**7.1.24**	

IV. Technology as a Productivity Tool: The student is able to use technology as a tool to enhance learning and creativity. Students are able to use technology to increase productivity in developing models, publications, and other creative works.	**Content Area**	**6**	**7**	**8**
11. Demonstrates spreadsheet and database skills by organizing and analyzing data. *Students describe how specific productivity tools support personal productivity, remediation of skill deficits, and their capacities for learning in different subjects*	**E/LA**	**6.5.3** **6.7.11**	**7.4.7** **7.5.3** **7.7.10**	**8.4.6** **8.5.3**
	SCI	**6.2.2** **6.2.7**		**8.7.3**
	SS	**6.1.23** **6.2.5** **6.3.10** **6.4.7**	**7.1.24** **7.2.3** **7.3.14**	**8.1.30** **8.1.31** **8.2.10** **8.3.8** **8.4.11**
12. Demonstrates presentation skills through the use of presentations package to create well-organized, informative oral presentations with highlighted key concepts, and through the use of basic design skills to enhance visual presentation. *Students know how to use technology tools and resources for managing and communicating personal, professional, or educational information (e.g., managing finances, schedules, addresses, purchases, correspondence, uniform resource locators [URLs], e-mail addresses, online references, citations).* *Students describe how to use online environments or other collaborative tools to facilitate design and development of materials, models, publications, and presentations; they know how to apply utilities for editing pictures, images, and charts.*	**E/LA**	**6.7.6**		
	SCI			**8.7.3**
	SS		**7.1.24**	**8.2.10**

IV. Technology as a Productivity Tool: The student is able to use technology as a tool to enhance learning and creativity. Students are able to use technology to increase productivity in developing models, publications, and other creative works.	**Content Area**	**6**	**7**	**8**
13. Demonstrates ability to use Internet search engines to access information by utilizing Web browser functions to locate and bookmark Internet Web sites. *Students know how to use content-specific hardware and software (e.g., environmental probes, graphing calculators, exploratory environments, simulations, Web tools) to support learning, research, productivity, and creative thinking.*	**E/LA**	**6.5.3 6.7.6 6.7.11**	**7.5.3 7.7.7 7.7.10**	**8.4.4 8.5.3**
	SCI			
	SS	**6.1.23 6.2.5 6.3.10 6.4.7**	**7.1.24 7.2.3 7.3.14**	**8.1.28 8.1.30 8.1.31 8.2.10 8.3.8 8.4.11**
14. Uses packaged or online help features of software program to support product use. *Students know how to use content-specific hardware and software (e.g., environmental probes, graphing calculators, exploratory environments, simulations, Web tools) to support learning, research, productivity, and creative thinking.*	**E/LA**	**6.7.6**		
	SCI			
	SS			
15. Demonstrates ability to use Internet search engines to access information by identifying and conducting searches using Internet/intranet search engines and directories. *Students know how to work collaboratively to design, develop content for, and construct a Web-based publication.*	**E/LA**	**6.2.1 6.4.6 6.5.3 6.7.6 6.7.9 6.7.11**	**7.5.3 7.7.7 7.7.10**	**8.4.4 8.5.3**
	SCI			
	SS	**6.1.23 6.2.5 6.3.10 6.4.7**	**7.1.24 7.2.3 7.3.14**	**8.1.28 8.1.30 8.1.31 8.2.10 8.3.8 8.4.11**

IV. Technology as a Productivity Tool: The student is able to use technology as a tool to enhance learning and creativity. Students are able to use technology to increase productivity in developing models, publications, and other creative works.	**Content Area**	**6**	**7**	**8**
16. Demonstrates word-processing skills by using the word processor to create outlines for papers and tables of contents for reports. *Students describe and apply common software features (e.g., spellchecker and thesaurus to ensure accuracy of word-processing documents; formulas and chart generation in spreadsheets, and insertion of pictures, movies, sound, and charts in presentation software) to enhance communication to an audience, promote productivity, and support creativity.*	**E/LA**	**6.4.7** **6.7.6**	**7.4.7**	**8.4.6**
	SCI			
	SS		**7.1.24**	
V. Technology as a Communication Tool: The student uses telecommunications to collaborate, publish, and interact with peers, experts, and other audiences. The student uses a variety of technologies to convey information, such as e-mail, e-learning, video conferencing, and telephony.	**Content Area**	**6**	**7**	**8**
1. Demonstrates telecommunications skills by collaborating and publishing with peers, experts, and other audiences. *Students know how to use telecommunications tools (e.g., e-mail, discussion groups, and online collaborative environments) to exchange data collected and learn curricular concepts by communicating with peers, experts, and other audiences.*	**E/LA**	**6.4.6**		
	SCI			
	SS			

V. Technology as a Communication Tool: The student uses telecommunications to collaborate, publish, and interact with peers, experts, and other audiences. The student uses a variety of technologies to convey information, such as e-mail, e-learning, video conferencing, and telephony.	**Content Area**	**6**	**7**	**8**
2. Selects an appropriate presentation format (e.g., paper, Web page, multimedia presentation, speech, or hypermedia. *Students know how to use a variety of media and formats to design, develop, publish, and present products (e.g., presentations, newsletters, Web pages) that effectively communicate information and ideas about the curriculum to multiple audiences.*	**E/LA**	**6.7.6**		
	SCI			
	SS			**8.2.10**
3. Demonstrates word-processing skills by using the word processor or reference software to cite references. *Students know how to plan, design, and develop a multimedia product using data (e.g., graphs, charts, database reports) to present content information.* *Students describe and apply common software features (e.g., spellchecker and thesaurus to ensure accuracy of word-processing documents; formulas and chart generation in spreadsheets, and insertion of pictures, movies, sound, and charts in presentation software) to enhance communication to an audience, promote productivity, and support creativity.*	**E/LA**	**6.4.7** **6.7.6**	**7.4.7**	**8.4.6**
	SCI			
	SS		**7.1.24**	

VI. Technology as an Information Research Tool: The student uses technology to access, review, evaluate, and select information from multiple resources for reporting purposes.	**Content Area**	**6**	**7**	**8**
1. Uses technology to conduct research by identifying a problem or question to be researched or resolved. *Students know how to search, collect, and evaluate resources from a variety of locations online, and construct a linked list of resources (e.g., information, research, data, photos, video clips, illustrations, and graphics) to support content learning and project development.*	**E/LA**	**6.2.1 6.4.6 6.5.3 6.7.6 6.7.9 6.7.11**	**7.5.3 7.7.10**	**8.4.4 8.5.3**
	SCI			
	SS	**6.1.23 6.2.5 6.3.10 6.4.7**	**7.1.24 7.2.3 7.3.14**	**8.1.28 8.1.30 8.1.31 8.2.10 8.3.8 8.4.11**
2. Evaluates and selects several resources from a variety of information sources by determining known and unknown information about research problem or question. *Students know how to conduct an advanced search using Boolean logic and other sophisticated search functions; they know how to evaluate information from a variety of sources for accuracy, bias, appropriateness, and comprehensiveness.*	**E/LA**	**6.2.1 6.4.6 6.5.3 6.7.6 6.7.9 6.7.11**	**7.5.3 7.7.10**	**8.5.3**
	SCI	**6.2.2 6.2.7**		
	SS	**6.1.23 6.2.5 6.4.7**	**7.1.24 7.2.3 7.3.14**	**8.1.28 8.1.30 8.1.31 8.2.10 8.3.8 8.4.11**

VI. Technology as an Information Research Tool: The student uses technology to access, review, evaluate, and select information from multiple resources for reporting purposes.	**Content Area**	**6**	**7**	**8**
3. Uses technology to conduct research by using common electronic reference resources to access information, such as almanacs, encyclopedias, indexes, online specialized databases, and online catalogs. *Students know how to research and evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources concerning real-world problems.*	**E/LA**	**6.2.1 6.4.6 6.5.3 6.7.6 6.7.9 6.7.11**	**7.5.3 7.7.10**	**8.5.3**
	SCI			
	SS	**6.1.23 6.2.5 6.4.7**	**7.1.24 7.2.3 7.3.14**	**8.1.28 8.1.30 8.1.31 8.2.10 8.3.8 8.4.11**
4. Evaluates and selects several resources from a variety of information sources by reviewing print, non print, video, electronic, and human resources for supporting and differing perspectives. *Students know how to select information and technological resources based on the appropriateness and efficiency for completing tasks, providing the desired information, or addressing the identified objectives.*	**E/LA**	**6.2.1 6.4.6 6.5.3 6.7.6 6.7.9 6.7.11**	**7.5.3 7.7.7 7.7.10**	**8.5.3**
	SCI			
	SS	**6.1.23 6.2.5 6.3.10 6.4.7**	**7.1.24 7.2.3 7.3.14**	**8.1.28 8.1.30 8.1.31 8.2.10 8.3.8 8.4.11**

VI. Technology as an Information Research Tool: The student uses technology to access, review, evaluate, and select information from multiple resources for reporting purposes.	Content Area	6	7	8
5. Evaluates and selects several resources from a variety of information sources by reviewing each author's credentials and validates the accuracy of information. *Students know how to identify and implement procedures for designing, creating, and populating a database; and, in performing queries, to process data and report results relevant to an assigned hypothesis or research question.*	**E/LA**	**6.5.3 6.7.6 6.7.9 6.7.11**	**7.5.3 7.7.10**	**8.5.3**
	SCI			
	SS	**6.4.7**	**7.1.24 7.3.14**	**8.1.28 8.1.30 8.1.31 8.2.10 8.3.8 8.4.11**
6. Evaluates and selects several resources from a variety of information sources by gathering information and applying it to solve the problem or question. *Students know how to select and use information and communication technology tools and resources to collect and analyze information and report results on an assigned hypothesis or research question.*	**E/LA**	**6.2.1 6.5.3 6.7.6 6.7.9 6.7.11**	**7.5.3 7.7.10**	**8.5.3**
	SCI			
	SS	**6.1.23 6.2.5 6.3.10 6.4.7**	**7.1.24 7.2.3 7.3.14**	**8.1.28 8.1.30 8.1.31 8.2.10 8.3.8 8.4.11**
7. Evaluates and selects several resources from a variety of information sources by adapting information for presentation to audience. *Students know how to identify and implement procedures for designing, creating, and populating a database; and, in performing queries, to process data and report results relevant to an assigned hypothesis or research question.*	**E/LA**	**6.5.3 6.7.6 6.7.9 6.7.11**	**7.5.3**	**8.5.3**
	SCI			
	SS	**6.1.23 6.2.5 6.4.7**	**7.1.24 7.3.14**	**8.1.28 8.1.30 8.1.31 8.2.10 8.3.8**

VI. Technology as an Information Research Tool: The student uses technology to access, review, evaluate, and select information from multiple resources for reporting purposes.	Content Area	6	7	8
8. Uses technology to conduct searches by using basic search techniques (e.g., subject, author, title, and keyword) to locate needed information on Internet/intranet search engines. *Students know how to research and evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources concerning real-world problems.*	**E/LA**	**6.2.1 6.4.6 6.5.3 6.7.6**	**7.5.3 7.7.7 7.7.10**	**8.4.4 8.5.3**
	SCI			**8.2.5**
	SS	**6.1.23 6.2.5 6.3.10 6.4.7**	**7.1.24 7.2.3 7.3.14**	**8.1.28 8.1.30 8.1.31 8.2.10 8.3.8 8.4.11**
9. Uses technology to conduct searches by using Boolean operators independently or with guidance to locate information. *Students know how to conduct an advanced search using Boolean logic and other sophisticated search functions; they know how to evaluate information from a variety of sources for accuracy, bias, appropriateness, and comprehensiveness.*	**E/LA**	**6.2.1 6.4.6 6.5.3 6.7.6**	**7.5.3 7.7.7 7.7.10**	**8.4.4 8.5.3**
	SCI			
	SS	**6.1.23 6.2.5 6.3.10 6.4.7**	**7.1.24 7.2.3 7.3.14**	**8.1.28 8.1.30 8.1.31 8.2.10 8.3.8 8.4.11**

VI. Technology as an Information Research Tool: The student uses technology to access, review, evaluate, and select information from multiple resources for reporting purposes.	Content Area	6	7	8
10. Uses technology to conduct searches by using sophisticated reference tools, such as biographical dictionaries and thesauruses in print and electronic formats. *Students know how to select and use information and communication technology tools and resources to collect and analyze information and report results on an assigned hypothesis or research question.*	**E/LA**	**6.4.6 6.5.3 6.7.11**	**7.5.3 7.7.10**	**8.4.4 8.5.3**
	SCI	**6.2.7**		
	SS	**6.1.23 6.2.5 6.4.7**	**7.1.24 7.3.14**	**8.1.28 8.1.30 8.1.31**
11. Evaluates and selects several resources from a variety of information sources by determining each author's bias or point of view. *Students know how to conduct an advanced search using Boolean logic and other sophisticated search functions; they know how to evaluate information from a variety of sources for accuracy, bias, appropriateness, and comprehensiveness.*	**E/LA**	**6.5.3 6.7.6 6.7.9**	**7.5.3 7.7.10**	**8.5.3**
	SCI			
	SS	**6.4.7**	**7.1.24 7.3.14**	**8.1.28 8.1.30 8.1.31 8.2.10 8.3.8 8.4.11**
12. Evaluates and selects several resources from a variety of information sources by using new information, and integrates it with prior knowledge. *Students know how to research and evaluate the accuracy, relevance, appropriateness, comprehensiveness, and bias of electronic information sources concerning real-world problems.*	**E/LA**	**6.2.1 6.5.3 6.7.6 6.7.9 6.7.11**	**7.5.3 7.7.10**	**8.5.3**
	SCI			
	SS	**6.2.5 6.4.7**	**7.1.24 7.3.14**	**8.1.28 8.1.30 8.1.31 8.2.10 8.3.8 8.4.11**

VI. Technology as an Information Research Tool: The student uses technology to access, review, evaluate, and select information from multiple resources for reporting purposes.	**Content Area**	**6**	**7**	**8**
13. Accesses and analyzes data for use in reporting results by using databases to locate entries, edit data, and enter data. *Students know how to create, edit, and modify a database report and identify trends reflecting analysis of the data.*	**E/LA**	**6.4.6 6.5.3 6.7.6 6.7.9**	**7.4.7 7.5.3 7.7.10**	**8.4.6 8.5.3**
	SCI	**6.2.2 6.2.7**		**8.2.5**
	SS		**7.1.24 7.3.14**	
14. Accesses and analyzes data for use in reporting results by creating reports using database information. *Students know how to select and use technology tools to efficiently analyze and display data.*	**E/LA**	**6.4.6 6.5.3 6.7.6 6.7.9 6.7.11**	**7.4.7 7.7.10**	**8.4.6 8.5.3**
	SCI	**6.2.2 6.2.7**		**8.2.5**
	SS	**6.1.23 6.2.5 6.4.7**	**7.1.24 7.3.14**	
VII. Technology as a Problem-Solving and Data-Driven Decision-Making Tool: The student uses technology to develop strategies for solving problems	**Content Area**	**6**	**7**	**8**
1. Uses technology to solve problems and make informed decisions. *Students identify two or more types of information and communication technology tools or resources that can be used for informing and solving a specific problem and presenting results, or for identifying and presenting an informed rationale for a decision.*	**E/LA**	**6.5.3 6.7.6 6.7.9 6.7.11**	**7.5.3 7.7.7 7.7.10**	**8.4.6 8.5.3**
	SCI		**7.2.6**	**8.2.4 8.7.3**
	SS	**6.1.23 6.2.5 6.3.2 6.3.10 6.4.7**	**7.1.24 7.2.3 7.3.2 7.3.14**	**8.1.28 8.1.30 8.1.31 8.2.10 8.3.8 8.4.11**

VII. Technology as a Problem-Solving and Data-Driven Decision-Making Tool: The student uses technology to develop strategies for solving problems	Content Area	6	7	8
2. Uses technology-based, data-driven, decision-support charting software tools to analyze a problem from different perspectives. *Students develop strategies for use of data analysis, models, and simulations to make specific decisions regarding a course of action for solving real-world problems.*	**E/LA**	**6.7.6 6.7.9**	**7.7.7**	**8.5.3**
	SCI			**8.7.3**
	SS	**6.1.23 6.2.5 6.3.10 6.4.7**	**7.1.24 7.3.14**	**8.1.28 8.1.30 8.1.31 8.2.10 8.3.8 8.4.11**
3. Uses technology-based, data-driven, decision support tools to review the outcome of a problem scenario over time. Almanacs, encyclopedias, indexes, online specialized databases, and online catalogs. *Students know how to apply formulas, functions, and "what if" statements in spreadsheets and graphs or charts to analyze and interpret data for content assignments.*	**E/LA**	**6.7.6 6.7.9**	**7.7.10**	**8.5.3**
	SCI			**8.7.3**
	SS	**6.1.23 6.2.5 6.3.10 6.4.7**	**7.1.24 7.2.3 7.3.14**	**8.1.28 8.1.30 8.1.31 8.2.10 8.3.8 8.4.11**
4. Uses technology-based, data-driven, decision-support simulation software tools to analyze a problem from different perspectives. *Students describe the information and communication technology tools they might use to compare information from different sources, analyze findings, determine the need for additional information, and draw conclusions for addressing real-world problems.*	**E/LA**	**6.7.6 6.7.9**		
	SCI			**8.7.3**
	SS	**6.1.23 6.2.5 6.4.7**	**7.1.24 7.3.14**	**8.1.28 8.1.30 8.1.31 8.2.10 8.3.8 8.4.11**

VII. Technology as a Problem-Solving and Data-Driven Decision-Making Tool: The student uses technology to develop strategies for solving problems	Content Area	6	7	8
5. Uses technology-based, data-driven, decision support tools to review the outcome of a problem scenario over time. *Students know how to identify a problem; develop a solution strategy; collect data on the effectiveness of the strategy; and analyze, interpret, publish, and present the data and conclusions based on real-world data.*	**E/LA**	**6.7.6 6.7.9**	**7.4.7**	**8.4.6**
	SCI			**8.7.3**
	SS		**7.1.24 7.3.14**	**8.1.28 8.1.30 8.2.10 8.4.11**